

CHAPTER 5

RECOGNIZING HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS



A Bell Jet Ranger 206-B helicopter struck this turkey vulture at an altitude of 600 feet. The bird penetrated the helicopter just below the squash plate. (Photo by Sgt. R. Ream, Michigan State Police)

5.1 INTRODUCTION

Land use practices and habitats are the key factors that determine the species of wildlife and the size of populations attracted to airport environments. The recognition and control of those land-use practices and habitats on or near airports that attract hazardous wildlife are fundamental to effective Wildlife Hazard Management Plans.

5.2 SEPARATION CRITERIA

The FAA, (through Advisory Circular [AC] 150/5200-33, *Hazardous Wildlife Attractants on or Near Airports* [Appendix C]) recommends maintaining separation between known hazardous wildlife attractants and airport aircraft movement areas, loading ramps, or aircraft parking areas. The minimum recommended distances are:

5.2.a Airports Serving Piston-powered Aircraft

A distance of 5,000 feet is recommended.

5.2.b Airports Serving Turbine-powered Aircraft

A distance of 10,000 feet is recommended.

5.2.c Approach or Departure Airspace

A distance of 5 statute miles is recommended if the wildlife attractant may cause hazardous wildlife movement into or across the approach or departure airspace.

5.3 WASTE DISPOSAL OPERATIONS

5.3.a Municipal Solid Waste Landfills



Municipal solid waste landfills are major attractants to wildlife, especially gulls and turkey vultures. Over 10,000 gulls were counted at this New York City landfill in 1987. (Photo by E. C. Cleary, FAA)

Municipal solid waste landfills attract hazardous wildlife, especially birds. These operations, when located within the separations identified in AC 150/5200-33 (see above and Appendix C) are incompatible with safe airport operations.

5.3.b Enclosed Trash Transfer Stations

Enclosed waste-handling facilities which receive garbage indoors, process it via compaction, incineration, or similar manner, and remove all residue by enclosed vehicles, generally are compatible, from a wildlife perspective,

with safe airport operations, provided they are not located on airport property or within the runway protection zone (RPZ). At these facilities, no putrescible waste should be handled or stored outside at any time, or in a partially enclosed structure accessible to hazardous wildlife.

Partially enclosed operations that accept putrescible waste are considered to be incompatible with safe airport operations. FAA recommends these operations occur outside the separations identified in AC 150/5200-33 (see above and Appendix C).

5.3.c Recycling Centers

Recycling centers that accept previously sorted, non-food items such as glass, newspaper, cardboard, or aluminum are, in most cases, not attractive to hazardous wildlife.

5.3.d Composting Operations



Yard-waste compost facilities generally do not attract bird species hazardous to aircraft. However, compost piles should be turned frequently to prevent population build-ups of commensal rodents such as Norway rats, which in turn can attract hawks and owls. (Photo by R. A. Dolbeer, USDA)

Composting operations which accept only yard waste (e.g., leaves, lawn clippings, branches) generally do not attract hazardous wildlife. However, yard-waste composting operations should not be located closer than the greater of the following distances: 1,200 feet from any aircraft movement area, loading ramp or aircraft parking space; or the distance called for by airport design requirements. This spacing is intended to prevent material, personnel, or equipment from penetrating any Object Free Area (OFA), Obstacle Free Zone (OFZ), Threshold Siting Surface (TSS), or Clearway (see FAA AC 150/5300-13, *Airport Design*). Components of the compost should never include food or other municipal

solid waste. Sewage sludge, wood-chips, and similar material are not municipal solid wastes and may be used as compost bulking agents. If composting is located on airport property, these operations should be monitored to ensure that steam or thermal rise does not affect air traffic. Discarded leaf disposal bags or other debris must not be allowed to blow onto active airport areas. Also, the airport operator should reserve the right to stop any compost operation that creates unsafe, undesirable, or incompatible conditions at the airport.

5.3.e Fly Ash

The incinerated residue from power/heat-generating facilities, which are fired by municipal solid waste, coal or wood, is generally considered not to be a wildlife attractant because it contains no putrescible matter. Landfills accepting only fly ash are generally not considered to be wildlife attractants. These landfills should be maintained in an orderly manner, admit no putrescible waste of any kind, and not be co-located with other disposal operations that attract hazardous wildlife.

Since varying degrees of waste consumption are associated with general incineration, the ash from general incinerators is considered to be a regular waste disposal by-product and, therefore, a hazardous wildlife attractant if located within the separation criteria outlined AC 150/5200-33 (see above and Appendix C).

5.3.f Construction and Demolition (C&D) Debris Landfills

C&D landfills are not considered to be hazardous wildlife attractants, if those landfills are maintained in an orderly manner, admit no putrescible waste, and are not co-located with other disposal operations.

C&D landfills have visual and operational characteristics similar to putrescible-waste disposal sites. When co-located with putrescible-waste disposal operations, the probability of hazardous wildlife attraction to C&D landfills increases because of the similarities between these disposal activities.

5.4 WASTEWATER TREATMENT FACILITIES.

Wastewater treatment facilities and associated settling ponds sometimes attract large numbers of birds that can pose a threat to aircraft safety when they are located on or near an airport.

5.4.a New Wastewater Treatment Facilities

Wastewater treatment facilities or associated settling ponds should not be constructed closer than the separations identified in AC 150/5200-33 (see above and Appendix C). During the siting analysis for wastewater treatment facilities, the potential to attract

hazardous wildlife should be considered if an airport is in the vicinity of a proposed site. Airport operators should voice their opposition to such sitings. In addition, airport operators should consider the existence of wastewater treatment facilities when



Sewage treatment plants attract birds. About 3,000 ducks, mainly northern shovelers, were feeding at this sewage lagoon near Mexico City, February 1999. (Photo by E. C. Cleary, FAA)

evaluating proposed sites for new airport development projects and avoid such sites when practicable.

5.4.b Existing Wastewater Treatment Facilities

Existing treatment facilities located on or near airports should incorporate appropriate wildlife hazard mitigation techniques (Chapter 9) to minimize use by hazardous wildlife.

5.4.c Artificial Marshes

Wetland sites designed to use submergent or emergent aquatic vegetation as natural filters may be attractive to some species of flocking birds, such as blackbirds and waterfowl, for nesting, feeding and roosting activities. Such artificial marshes should not be established within the separations identified in AC 150/5200-33 (see above and Appendix C).

5.4.d Wastewater Discharge and Sludge Disposal

Disposal of wastewater and sludge should not occur on airport property. Regular spraying of wastewater or sludge disposal on unpaved areas may improve soil moisture and quality. The resultant turf growth requires more frequent mowing, which in turn may expose insects and small mammals. The exposed organisms serve as a food source for hazardous wildlife such as gulls, starlings and raptors. In addition, the improved turf may attract grazing wildlife such as deer and geese.

Problems may also occur when discharges saturate unpaved airport areas. The resultant soft, muddy conditions can severely restrict or prevent emergency vehicles from reaching accident sites in a timely manner.

5.4.e Underwater Waste Discharge

Underwater discharge of any food or other putrescible waste (e.g., fish processing offal) that could attract scavenging wildlife such as gulls is not recommended within the separations identified in AC 150/5200-33 (see above and Appendix C).

5.5 WETLANDS

5.5.a Wetlands on or near Airports

Airport operators with wetlands located on or near airport property should be alert to any wildlife use or habitat changes in these areas which could affect safe aircraft operations.

New airport development should take place in areas where wetlands are outside the separations identified in AC 150/5200-33 (see above and Appendix C) whenever practical. Where alternative sites are not practicable, or when expanding existing

airports in or near wetlands, the wildlife hazards should be evaluated and minimized through a wildlife management plan. The plan should be prepared by a wildlife damage management biologist, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the U.S. Army Corps of Engineers (COE). If questions exist as to the status of an area as a wetland, contact the COE, the Natural Resource Conservation Service, or a wetland consultant certified to delineate wetlands.

5.5.b Wetland Mitigation

Creation, enhancement, restoration or, in rare cases, preservation of wetlands may be necessary when unavoidable wetland disturbances result from airport development projects. Wetland mitigation should be designed to avoid creating wildlife hazards.



Recognizing the ecological importance of wetlands, the U. S. Government has established a national policy of no net wetland losses. Wetlands perform a variety of ecologically important functions, such as flood control, water filtration, and wildlife and fish production. (Photo courtesy USDA)

Wetland mitigation projects which may attract hazardous wildlife should be sited outside of the separations identified in AC 150/5200-33 (see above and Appendix C). Wetland mitigation banks meeting these siting criteria offer an ecologically sound approach to mitigation in these situations. Wetland banks are developed to restore, enhance, create or, in rare cases, preserve wetlands to mitigate unavoidable wetland impacts before they occur. Appendix L provides more information on wetland banking and FAA guidance on using that mitigation alternative.

Exceptions to locating mitigation activities outside the separations

identified in AC 150/5200-33 (see above and Appendix C) may have to be considered if the affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water recharge. Such mitigation must be compatible with safe airport operations. Enhancing such mitigation areas to attract hazardous wildlife should be avoided. The FAA may review on-site mitigation plans to determine compatibility with safe airport operations.

Wetland mitigation projects needed to protect unique wetland functions, and which must be located in the siting criteria identified in AC 150/5200-33 (see above and Appendix C), should be identified and evaluated by a wildlife damage management biologist before implementing the mitigation. A plan should be developed to reduce the attractiveness of the wetland area to species hazardous to aviation safety.

5.6 DREDGE SPOIL CONTAINMENT AREAS

Dredge spoil containment areas should be located outside of the separations identified in AC 150/5200-33 (see above and Appendix C) if the design of the containment area is such that it would be attractive to hazardous wildlife or if the spoil contains material that would attract hazardous wildlife. Any dredge spoil containment area to be located in the siting criteria identified in AC 150/5200-33 should be evaluated by a wildlife damage management biologist before construction begins. A plan should be developed to reduce the attractiveness of the site to species that are hazardous to aviation safety.

5.7 AGRICULTURAL PRACTICES

5.7.a Crop Production

Airport operators sometimes promote revenue-generating activities to supplement an airport's income. A common concurrent use is agricultural crop production. Such use may create hazards to aircraft by attracting wildlife. Any proposed on-airport agricultural operations should be reviewed by a wildlife damage management biologist. Cereal grain and sunflower production should not occur on airport property and should be discouraged within the separations identified in AC 150/5200-33 (see above and Appendix C).



Agricultural practices, such as sunflower production (left) and livestock feedlots (right), are inherently attractive to a variety of flocking birds and should be discouraged if they are within 2 miles of an airport. (Photos courtesy USDA)

If a problem with hazardous wildlife develops, a wildlife damage management biologist should be contacted and an on-site inspection conducted. The biologist should determine the source of the hazardous wildlife attraction and suggest remedial action. Regardless of the source of the attraction, prompt remedial actions to protect aviation safety is required. The remedial actions may range from choosing another crop or farming technique to complete termination of the agricultural operation.

Any post-harvest crop residues that are attractive to foraging wildlife should be plowed under. This requirement should be written into all on-airport farm use contracts and clearly understood by the lessee.

5.7.b Livestock Production

Confined livestock operations (i.e. feed lots, dairy operations, hog or chicken production facilities, egg laying operations) often attract flocking birds such as starlings that may pose a hazard to aviation. Therefore, these facilities should be discouraged within the separations identified in AC 150/5200-33 (see above and Appendix C). Any livestock operation within the above separations should have a program developed to reduce the attractiveness of the site to species that are hazardous to aviation safety.

Free-ranging livestock should not be grazed on airport property because of the danger of their wandering onto aircraft movement areas. Additionally, birds may be attracted to livestock feed, water and manure.

5.7.c Fish Production (Aquaculture)

Fish production facilities using ponds or raceways are inherently attractive to a variety of fish-eating birds (e.g., herons, gulls, osprey) that may pose hazards to aviation safety. Therefore, these facilities should be discouraged within the separations identified in AC 150/5200-33 (see above and Appendix C). Any fish production facility within the above separations should have a program developed to reduce the attractiveness of the site to species that are hazardous to aviation safety.